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Raw Diet – BASE Mix

Ingredient	Amount
Ground Meat	1 pound
Liver	1 ounce
Carbohydrates	6 ounces
Oysters	1 ounce
Egg	2 (see note below on shells) This amount is without shell

- This mix can be made in any size batch and frozen. At this point; however, the mix is NOT balanced. It does need additional supplementation.
- This is the portion of the diet that provides calories from fat, protein and carbohydrates. Increase or decrease the amount you feed your puppy to maintain adequate body condition/weight. Every dog/puppy has a different metabolism so it is difficult to estimate how much to feed. Generally, a good rule of thumb is 5.0 – 6.0% of body weight to start, then adjust up or down to maintain ideal body condition/weight.
- Ratios should always be kept the same but larger batches can be made and frozen. For example, you could mix 3 pounds of meat + 3 ounces liver + 18 ounces carbohydrates and 3 ounces oysters.

Meats	I recommend alternating meat/protein sources. I use neutral or cool proteins such as pork, beef, turkey. I seldom use chicken but you can (it is a hot protein). I use hot proteins (chicken, lamb, venison) in deep winter months. A holistic veterinarian can assist you in determining where your puppy is in relation to diet.	
Carbohydrates	I include carbohydrates for many reasons including gut health and stool quality. I recommend a mixture of fruits, vegetables and grains (yes, I use grains all the time. I don' have issues with grains, nor do my dogs. If your dogs do, then don't use them and replace with fruits and vegetables).	
	 Fruits should be pureed and could include: berries, bananas, peaches, apples and pineapple. This is not an exhaustive list. Vegetables should be steamed and pureed and could include: sweet potato, greens, green beans, beets, carrots, broccoli, cauliflower (this is not an exhaustive list. I give my dogs the same fruits/grains/vegetables I'm eating that week). Grains are excellent for stool quality and gut health. I do not avoid grains with my dogs as my dogs tolerate them well. I typically use oatmeal (cooked) but also use cooked barley, rice or quinoa. NOTE: I use 4 different carbohydrates for each week in fairly equal portions. For example, I might include 1.5 oz each of cooked oatmeal, spinach, sweet potato, banana. There are few rules to this. If you know your puppy can't tolerate something then don't feed it. I do not feed grapes or onions. 	

Notes regarding ingredients of BASE mix

Oysters	Oysters are excellent sources of lean protein and zinc. I am very particular about the	
	copper to zinc ratio in my diets as often these are out of balance. Oysters can be fresh or	
	canned but ideally not smoked.	

At time of feeding your puppy will need proper supplementation to balance vitamins and minerals. The above "mix" is not a complete diet and will not support proper growth. The following supplements are required in my opinion and do a good job of balancing key nutrients and ensuring that all vitamins/minerals are met without being excessive. I prefer to use human grade supplements opposed to canine supplements. That being said, supplements are also where things get a bit tricky.

SUPPLEMENT SHOPPPING LIST

Thorne Research IV with Copper and Iron – This is a human product. Opti Pet from Omega Alpha if you have very small dogs that will not be consuming 1 lb diet per week.

Kelp powder – I use NOW Foods Kelp Powder but there are many similar products (this provides iodine)
 Dicalcium phosphate or Bone Meal – If using bone meal, make sure to buy a high quality human grade bone meal product. For puppies I DO NOT use calcium carbonate or egg shells because of the lack of phosphorus. It will increase calcium but not phosphorus; therefore, unbalances the Ca:P ratio and can cause improper growth. h

You can eliminate this supplement if you feed half of the meals per week as raw meaty bones or split the meat volume equally with muscle meat and raw meaty bone meats such as chicken necks/wings/legs that can be completely consumed.

Standard Process Ferrofood – This is a whole food supplement that increases iron.

Minerals are quite stable; however, vitamins are not. They are very sensitive to moisture and freezing; therefore, should not be added until time of feeding. Kelp can be added to the mix above as can calcium carbonate (egg shells) and dicalcium phosphate. *The Thorne vitamins should be added at feeding time specifically.*

For every **pound of BASE mix** fed, the following are needed to balance the nutrients:

- 2 scoops of NOW Foods Kelp Powder (this products comes with a 100 mg scoop that works great)
- 1.5 tsp dicalcium phosphate or bone meal
- 0.5 Thorne IV with copper and iron (no more than 1 per puppy is needed per day even if they consume more than 2 lb daily)
- 1 Standard Process Ferrofood (no more than 2 per day is needed)
- Note for very small dogs = I have dogs that are less than 10 lb and it takes a week for them to eat 1 pound of BASE mix. In these cases, I replace the Thorne IV with a product from Canada called Omega Alpha Opti Pet. It is a liquid and works quite well; however, you will have to also add some vitamin E. I order a liquid Vitamin E from NOW foods that contains about 30 IU per drop. My little guys get 1 drop every other day. Larger puppies that will be over 20 lb as adults can have 1 drop daily. Opti Pet can be dosed at 1 mL per day for little puppies and 2 mL for those larger than 20 lb. I would use the Thorne supplement for any puppy that will be over 20 lb as an adult once they are consuming an amount that makes the dosing easier.

Diet contains approximately	43 Kcal/ounce or 6	88 Kcal/pound
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Nutrient	Diet Concentration	Recommendation (2006 NRC*)
Crude fat, %	24.40	11.18
Protein, %	44.00	28.94
Tryptophan, %	0.53	0.30
Lysine, %	3.28	1.13
SAA, %	1.77	0.90
BCAA, %	8.03	3.37
Arginine, %	2.51	1.02
Vitamins		
Folate (mg/kg)	1.58	0.35
Pantothenic acid (mg/kg)	302.66	19.28
Vitamin B12 (ug/g)	0.40	0.04
Vitamin D3 (IU/g)	1.00	0.71 - 4.20
Niacin (mg/kg)	207.26	21.85
Riboflavin (mg/kg)	16.54	6.78
Thiamin (mg/kg)	32.17	1.75
Vitamin A (IU/g)	56.39	6.49 - 65.56
Vitamin B6 (mg/kg)	15.00	1.93
Vitamin E (mg/kg	329.07	38.55
Minerals		
Calcium (%)	2.40	1.54
Phosphorus (%)	1.32	1.29
Ca:P ratio	1.80	1-2
Magnesium (%)	0.12	0.05
Selenium (mg/kg)	0.50	0.45
Iron (mg/kg)	140.80	113.08
Potassium (%)	0.64	0.57
Sodium (%)	0.25	0.25
Copper (mg/kg)	14.34	13.88
Iodine (mg/kg)	1.97	1.13
Manganese (mg/kg)	7.38	7.20
Zinc (mg/kg)	165.30	128.50

Freezing and storage will reduce the concentration of many of the vitamins that are indicated in the above table. None of the concentrations are at excessive concentrations, considering storage losses will occur. SAA = sulfur amino acids, including methionine and cysteine are important for maintaining urine pH. BCAA are branched chain amino acids including valine, leucine isoleucine and are important for maintaining lean tissue particularly for seniors.